



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,620	12/17/2003	Woong-Kwon Kim	053785-5123	4079
30827 7590 06/18/2007 MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			EXAMINER SCHILLING, RICHARD L	
			ART UNIT 1752	PAPER NUMBER
			MAIL DATE 06/18/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**UNITED STATES DEPARTMENT OF COMMERCE****U.S. Patent and Trademark Office**

Address : COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10736620	12/17/03	KIM ET AL.	053785-5123

MCKENNA LONG & ALDRIDGE LLP  
1900 K STREET, NW  
WASHINGTON, DC 20006

**EXAMINER**

Richard L. Schilling

ART UNIT	PAPER
----------	-------

1752

20070604

**DATE MAILED:**

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner for Patents**



UNITED STATES PATENT AND TRADEMARK OFFICE

---

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**MAILED**  
**JUN 18 2007**  
**GROUP 1700**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/736,620  
Filing Date: December 17, 2003  
Appellant(s): KIM ET AL.

McKenna, Long & Aldridge LLP  
For Appellant

**EXAMINER'S ANSWER**

Application/Control Number: 10/736,620

Page 2

Art Unit: 1752

This is in response to the appeal brief filed March 08, 2007 appealing from the Office action mailed November 10, 2005.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**WITHDRAWN REJECTIONS**

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner.

Application/Control Number: 10/736,620

Page 3

Art Unit: 1752

The rejection of claims 1-34 under 35 USC 103 as being unpatentable over Chang et al. in view of Peng et al. is withdrawn in view of appellants' statement on page 10 of their brief that Chang et al. and the instant application were subject to an obligation of common assignment at the time the invention was made.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,448,158

Peng et al.

9-2002

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-34 are rejected under the first paragraph of 35 USC 112 as being broader than the enabling disclosure. The specification fails to show one skilled in the art how to pattern the second electrodes of the claims on appeal comprising amorphous transparent layers which are light exposed to crystalline states with the unexposed non-crystallized portions being removed without the exposed crystalline state portions being removed other than by the methods disclosed in the specification on page 24, paragraph 49 and page 25, paragraph 50. The enabling disclosure is limited to using amorphous indium tin oxide (ITO) or indium zinc oxide as the amorphous material which has the properties of changing to crystalline by exposure to light and being removable by oxalic acid in the amorphous but not the crystalline state.

Application/Control Number: 10/736,620

Page 4

Art Unit: 1752

The enabling disclosure is also limited to using oxalic acid in the etching step to remove the amorphous state but not the crystalline state. It is not well known in the art what other amorphous materials may be used which form crystalline materials on exposure to light, are transparent, are electrically conductive for use in liquid crystal displays as in the claims on appeal and which may be removed only in the amorphous state without removal in the crystalline state. Peng et al. shows that a method of exposing ITO amorphous layers to light to form crystalline areas wherein the unexposed amorphous area are removable by oxalic acid as disclosed in appellants' specification is an non-obvious, patentable method of imaging an electrode. To find other methods using different materials with all of the properties required by the claims on appeal would require finding materials not apparent or obvious from the amorphous materials disclosed in appellants' specification.

**(10) Response to Argument**

Appellants' argument on page 9 of their brief that they are entitled to materials that would be obvious to one skilled in the art that fall within the claims on appeal is unconvincing. The specification lacks guidance as to other obvious materials. The method in the specification is limited to using ITO or IZO amorphous layers without guidance as to other materials which would have all the properties of being useful as electrodes, being changeable from amorphous to crystalline with light exposure and being removable in the amorphous state with etching agents of oxalic acid without being removable in the crystalline state. The specification also lacks guidance to etching agents other than oxalic acid that would remove the materials in the amorphous state

Application/Control Number: 10/736,620

Page 5

Art Unit: 1752

but not in the crystalline state. As explained in the above rejection, Peng et al. shows that the methods of patterning as disclosed on pages 24 and 25 of appellants' specification are not obvious from other methods of patterning electrodes but rather are non-obvious patentable methods. It would not be apparent to one skilled in the art from the methods disclosed in appellants' specification for the step of patterning the second electrode in the claims on appeal what other amorphous materials and removing agents other than those disclosed may be used without undue experimentation.

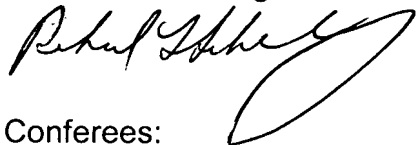
**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Richard I. Schilling



Conferees:

Jennifer Kolb-Michener

Cynthia Kelly

